



**Vertasil<sup>®</sup> TM-CBD1** is a patented multi-functional trisiloxanyl-cannabidiol hybrid silicone fluid specifically designed to extend solubility and improve compatibility of Cannabidiol (CBD) with silicone oils and PDMS gels without compromising the activity or benefits of Cannabidiol. Vertasil<sup>®</sup> TM-CBD1 is the only ingredient that makes the delivery of Cannabidiol possible from PDMS gels.

Property	TM-CBD1
Color	Clear to slight yellow
Odor	Slight, characteristic
Density	0.96 g/mL
Refractive Index	1.453 @25°C
Viscosity	70 cSt
Molecular Weight	534.96 g/mol
Flash Point	140°C

### VERTASIL<sup>®</sup> TM-CBD1 Benefits

- Ease of incorporation
- Soluble in natural oils and silicones
- Compatible with silicone PDMS gels
- Non-greasy, soft, and lubricious feel

### VERTASIL<sup>®</sup> TM-CBD1 Applications

- Silicone serums and oils
- Silicone patches
- Scar treatment patches
- Stretch mark patches
- Face and eye treatment masks

**Vertasil® TM-CBD1** has improved solubility parameters making it compatible with a wider range of cosmetic ingredients including natural oils, hydrocarbons, esters, glycols, silicones, and silicone derivatives. In addition, it provides the lubricity and softness of silicone oil, without greasiness of natural oils.



### Solubility of Vertasil® TM-CBD1

Ingredient Type	Vehicle	99% CBD Isolate	Vertasil® TM-CBD1
Natural oils & hydrocarbons	Castor Oil	✓	✓
	Triglycerides		
	Isopropyl Myristate		
	Ethylhexyl Pamitate		
	Sunflower Oil		
	Almond Oil		
	Octododecanol		
Mineral Oil			
Water	Water	✗	✗
Glycols	Glycerin	✓	✓ (partial)
	Propanediol		
	Butylene Glycol		
	Polyethylene Glycol		
Silicones	SiBrid® TM-031	✗	✓
	SiBrid® TM-081		
	SiBrid® DE-12		
	Dimethicone		
	Cyclomethicone		
Silicone derivatives	Vertasil® TM-L01	✓	✓
	Vertasil® TM-VE1		
	Vertasil® VAN-07		
	Vertasil® VLN-07		

### Intense Treatment Patches with Vertasil® TM-CBD1

#### Phase A

Polydimethylsilicone Gel, A	54.35
Silicon Dioxide	2.00
Propyltrisiloxane	18.00
Trimethylsiloxysilicate	18.00
Trisiloxanyl-Cannabidiol	0.50

#### Phase B

Pigments	0.08
Polydiethylsiloxane	0.07

#### Phase C

Polydimethylsilicone Gel, B	7.00
-----------------------------	------

### Procedure

- Combine ingredients from Phase A and mix thoroughly
- Mix Phase B ingredients and mill in a roller mill to properly disperse pigments
- Add Phase A + B and mix thoroughly
- Add Phase C to A + B and mix thoroughly
- Pour formula into an appropriate form and cure at 120°C for 1 hour